GeoAutomation®

DAVID EVANS AND ASSOCIATES INC.

Introducing GeoAutomation® – an advanced 3D photographic imaging system that provides a unique high-tech and efficient answer to surveying and measuring applications.

One collection for multiple county and city client demands

What it is

- Rapid data capture system
- Captures a virtual world for desktop inventory and survey applications
    - 360 degree, 3D digital imagery with measureable pixels
- Feature recognition capabilities provide automated feature attribution
- Work within ArcGIS, AutoCAD or MicroStation to view, measure and attribute data

How it works

- Vehicle mounted survey system
    - 14 cameras provide 360° field of view
    - 27 pictures per second
- Data captured by driving roadways at regular traffic speeds
- Similar to *Google Street view* in imagery look but features can be measured and attributed
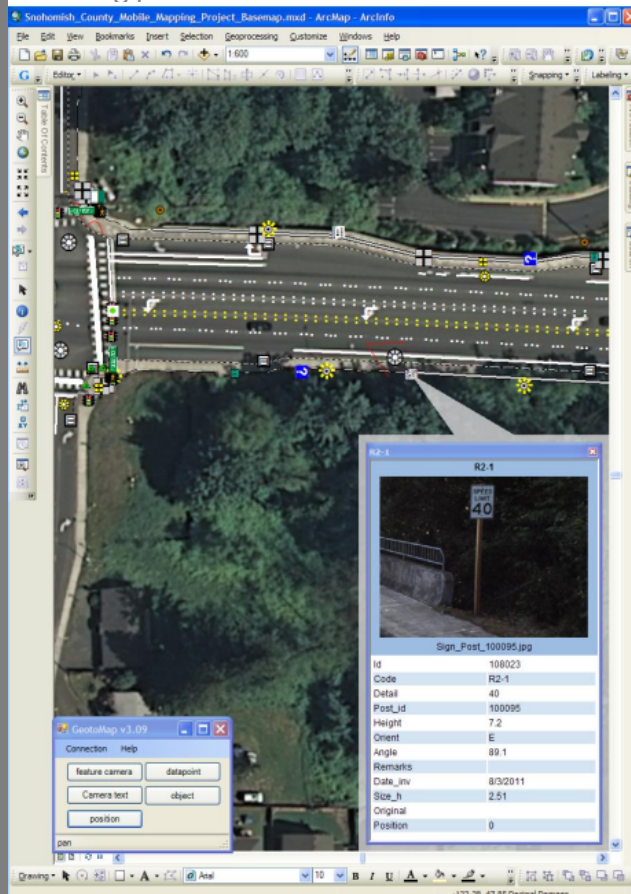
- Imagery may also be used to create/edit/update features with accurate x, y location

surveying and geomatics

Deliverable

A 3D imagery set with geo-referenced, measureable pixels
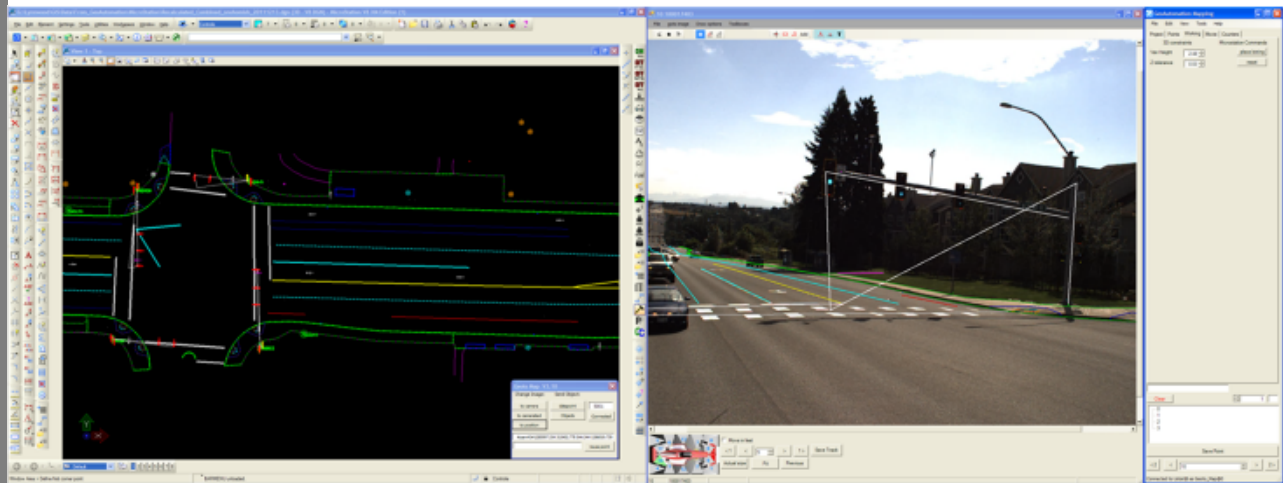
Includes free plug-in for ArcGIS, AutoCAD or MicroStation allowing end user to use their existing platform

- Mapping grade accuracy acquired without survey control
- Higher accuracies can be acquired with minimal survey control
- Accuracies can be improved subsequent to data capture

If desired, trees, traffic signs, milepost markers, utility poles, guardrails, lane striping and other recognizable **features can be automatically captured and attributed** as an additional deliverable

Use

- A virtual desktop view of real world environment
- Easily navigate along the collected areas

    All cameras and images are linked together so no matter what image you are reviewing, all other images at that given location are location correct

- Works directly in the GIS database
- Dramatically reduces the amount of field attribution

    GPS positions and feature attributes populated at the desktop or automatically populated through feature recognition capability

- Prepare reports

    Data can be fenced and a report generated of the utilities and roadway assets mapped in that specific area
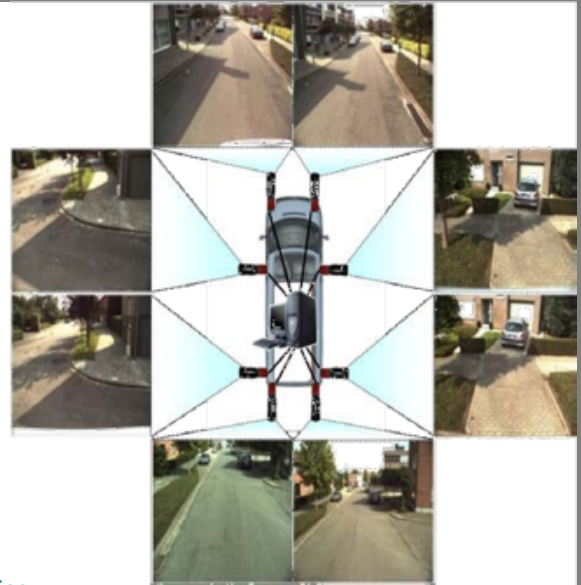
Supports

- Roadside Features Inventory
- Bridge Clearance Measurement
- FHWA Compliance for Clear Zones
- Right of way and access encroachment
- Bridge and structure as-built
- ADA features inventory
- Safety surveys

- Planning and Scoping
- Channelization
- Outdoor advertising, monitoring and violation detection
- Pavement Assessments
- Sign and Asset Inventory
- Roadway Asset Condition Assessments
- Traffic Planning and Modeling

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Advantages

• Based on Photogrammetry principals and techniques

Imaging equipment is routinely calibrated

GPS and collection planning for best PDOP and GPS satellite coverage

Collection taken at higher sun angles to reduce sun glare at the horizon

Collection planning for reduced obstructions in the images

• Rapid data collection

Capture data on hundreds of miles of roads a day. No manual collection necessary.

• Faster attribution

More attributing at the desktop, less in the field

Less time processing data from field to office. No special equipment needed.

*Features can be attributed through **automatic feature recognition***

Less manual attribution

More roadway miles completed per month at same staffing levels

•Feature extraction can be performed by county personnel with a minimum amount of training

•Less fragmented work approach

Data capture for multiple uses

Less field to office data translation

Work directly in GIS

• Safety

Less field personnel working along highways

• Accurate geo-referencing

•Can be combined with video log capture

To learn more about GeoAutomation® and how DEA can assist you on your next project, please contact:

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